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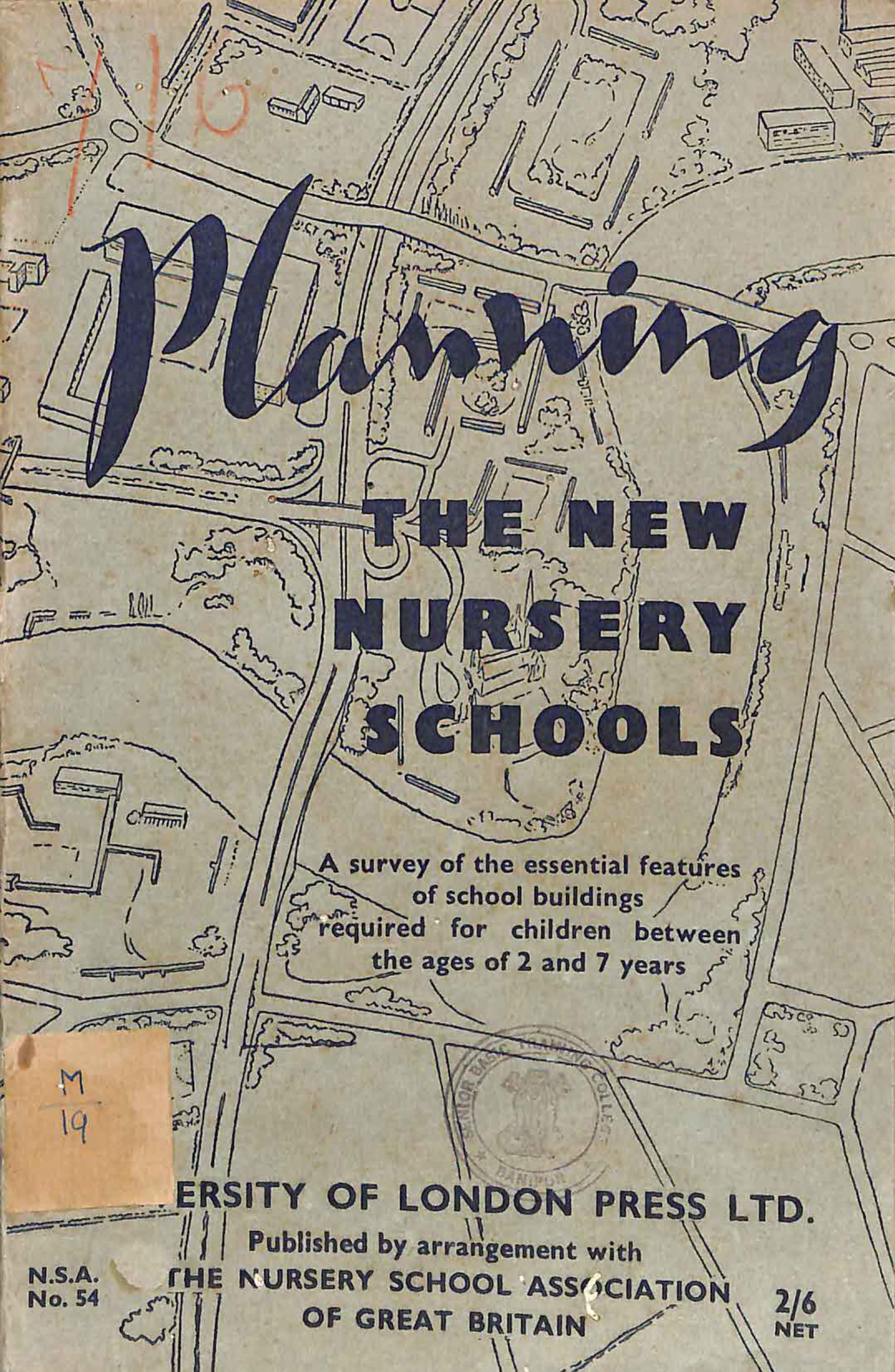

Planning

THE NEW NURSERY SCHOOLS

A survey of the essential features of school buildings required for children between the ages of 2 and 7 years

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PLANNING THE NEW NURSERY SCHOOLS

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SENIOR BASIC TRAINING COLLEGE

PLANNING THE NEW NURSERY SCHOOLS

1. The new Education Bill* imposes on Local Education Authorities the duty to provide nursery school education for children from the age of 2 years. There will therefore be many new nursery schools after the war and the Nursery School Association desires to place at the disposal of Local Education Authorities and their Architects, a series of recommendations which will help them to plan such schools. In September 1943 a Buildings Advisory Committee was formed of members of the Nursery School Association and other specialists, who found it necessary to review all the requirements of children attending school between the ages of 2 and 7 years, before detailed consideration could be given to building requirements.

2. The present Report deals with urban conditions for new schools. Other Reports will follow on:

The rural school both new and adapted.
Adaptation of existing premises in urban areas.
The infant school with nursery classes.

3. The Committee, not desiring to stultify original thought on the part of Local Authorities and their professional advisers, has refrained from publishing any set plans or detail type plans. The recommendations in this Report have been accepted by the Nursery School Association and are now published as a guide to those whose very important responsibility it will be to plan and build the new nursery schools.

4. It must constantly be borne in mind during the reading of these recommendations that the primary aim of nursery school education is to lay the foundations for the development of healthy and happy children, and whilst the Committee has given careful and constant consideration to the claims of economy, these have not been allowed to take precedence over the recognition of the fundamental needs of the children.

5. Too often funds allocated to the building of new schools are all absorbed by the actual structure and fittings leaving nothing for the outdoor playing space. In the nursery school the building and garden have equal importance. Designers of nursery schools must understand the importance of the external lay-out and its relation to the building. A nursery school without a garden is a contradiction in terms ; it is no nursery school. A garden is the natural place for young children to grow in and there are few days in this country when children cannot spend a large part of their time out of doors, if the garden and buildings are planned with this in view.

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* This Report was written before the Bill became an Act.

6. In the earliest years of a child's life, home is all-important. The consideration of plans for homes is beyond the scope of this study, but it is obvious that all children need home conditions of a kind that will foster health and general well-being. Plans for good homes are needed alongside plans for good schools. Throughout childhood home will share with school in the balanced care of all children. Both home and school must be good places in which a child may spend his time.

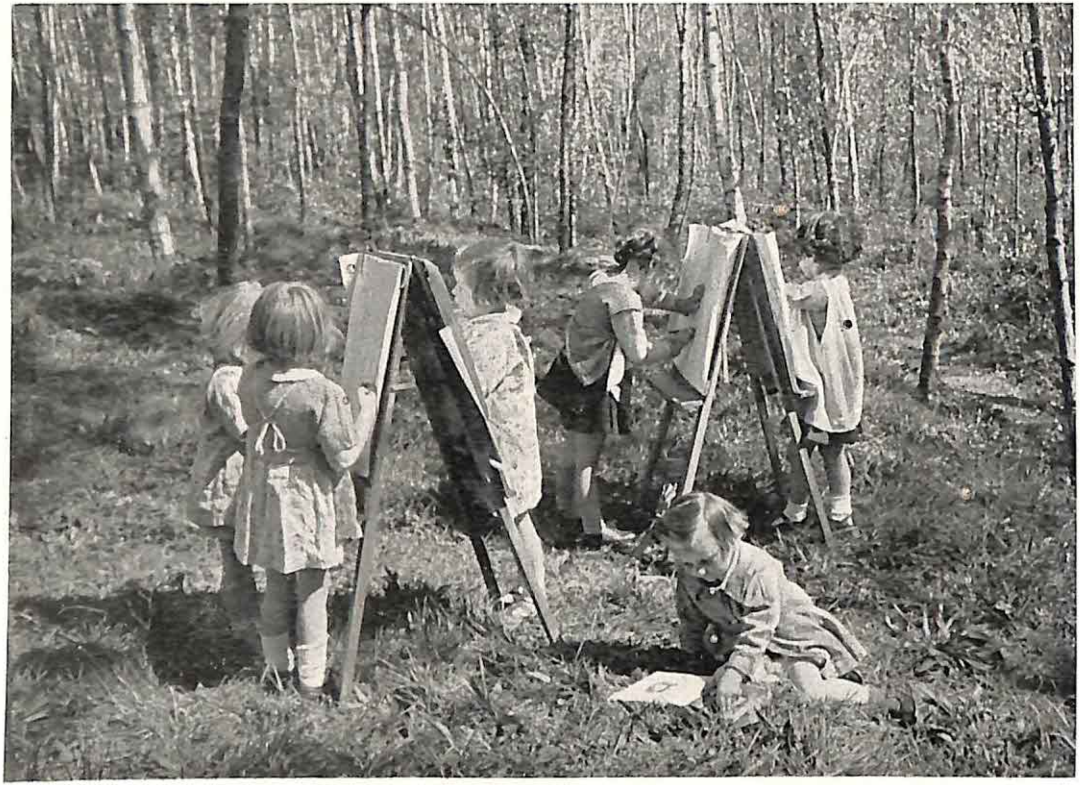
7. Plans for schools start with those for nursery schools for children of 2 years and upwards. By this time in his life, a child is beginning to need fresh interests and fresh companionship, and he enjoys spending part of his day in a nursery school. It is very necessary for the school to be near enough to his home for his parents to visit it easily, and for the teachers to be able to visit his home. It is for this reason that in the following recommendations it is suggested that nursery schools should be available for children within a maximum radius of a quarter mile of their homes. It is appreciated that this may not always be possible in rural areas.

8. This Report makes frequent mention of the age range 2-7 years rather than 2-5 years as the period for which the advantages of nursery school education should be provided. The period 5-7 years, the first two years of compulsory attendance at school, is properly part of the first stage in education, and the infant school is, in planning, more directly related to the nursery school stage than to the junior school stage. Children need continuity of opportunity, and the discontinuance at the age of 5 years of much that is helpful in their education until then, cannot but be damaging.

9. It should be emphasized that space for activity indoors and out, small groups with generous staffing, adequate and suitable toilet arrangements, do not cease to be the necessary auxiliaries of education when the child reaches the age of 5 years.

10. Many children will not enter school until the compulsory attendance age is reached. They, too, will benefit incalculably from two years, at least, in a school where the principle of all-round care has been the primary consideration in the mind of the designer and the teacher. Such planning is not extravagant. It is simply the outcome of sound commonsense, which seeks to ensure that the best possible foundations are laid during the early and impressionable years.

11. In the nursery school the child must find the possibility of developing all his capacities to the full. If he is to develop as a whole person he must live in conditions which safeguard and foster good physical health; which allow for vigorous and satisfying muscular activity; which provoke lively thinking; which encourage friendly and helpful behaviour; which give opportunities for the



PAINTING UNDER THE TREES IN A NURSERY SCHOOL GARDEN IN GUILDFORD

Photo Daily Mirror

relief of troubled feeling and strengthen confident and satisfied feeling.

12. The nursery school is a bridge between home and the bigger school. It must be home-like in character and easily accessible to the parents, while providing a setting for the first explorations of the young members of the family outside the family circle. Children at this age enjoy real jobs, they have a lively interest in the world around them, and they like to help to look after themselves. This is the natural basis for future education, for the development of character, as well as of interest in gaining skill and knowledge. All these opportunities must be remembered in planning the nursery school setting. For this reason the Committee recommends that every nursery school must have good outdoor space full of growing things. Each nursery school should also have its own kitchen so that the children will not only see and share in the preparation of their meals, but will meet people like the cook, the milkman and the grocer, who form part of the wider community. Similarly, within the nursery school the height of taps, wash basins, door handles and pegs is of significance in helping children to look after themselves, and the encouragement of practical effort is of great importance in the development of character.

13. The nursery school helps children to learn to live happily together in a group. It defeats its own purpose if it is planned on so large a scale that there is a danger of the younger children being bewildered and unable to take their part in the life of the group. The Committee, therefore, strongly urges that not more than 40 children between 2 and 5 years should constitute one unit. When the age is extended to 7 years, larger units may be formed, as will be described later, but throughout this Report the basic unit of 40 children under 5 is adopted for the various recommendations made, irrespective of the manner in which these units may be grouped.

14. The Nursery School Association urges that:

(*a*) All schools be designed by Architects who have made a study of the special needs of children.

(*b*) In planning the external lay-out in relation to the building and surroundings in their wider setting, the Architect should work from the start in collaboration with a trained Landscape Architect.*

(*c*) Furthermore, when a school is being designed there should be continuous consultation with experienced teachers.

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* Where a Landscape Architect has not yet been appointed by a Local Authority, advice should be sought from the Institute of Landscape Architects, 12 Gower Street, London, W.C.1.

SITING IN RELATION TO POPULATION DENSITIES

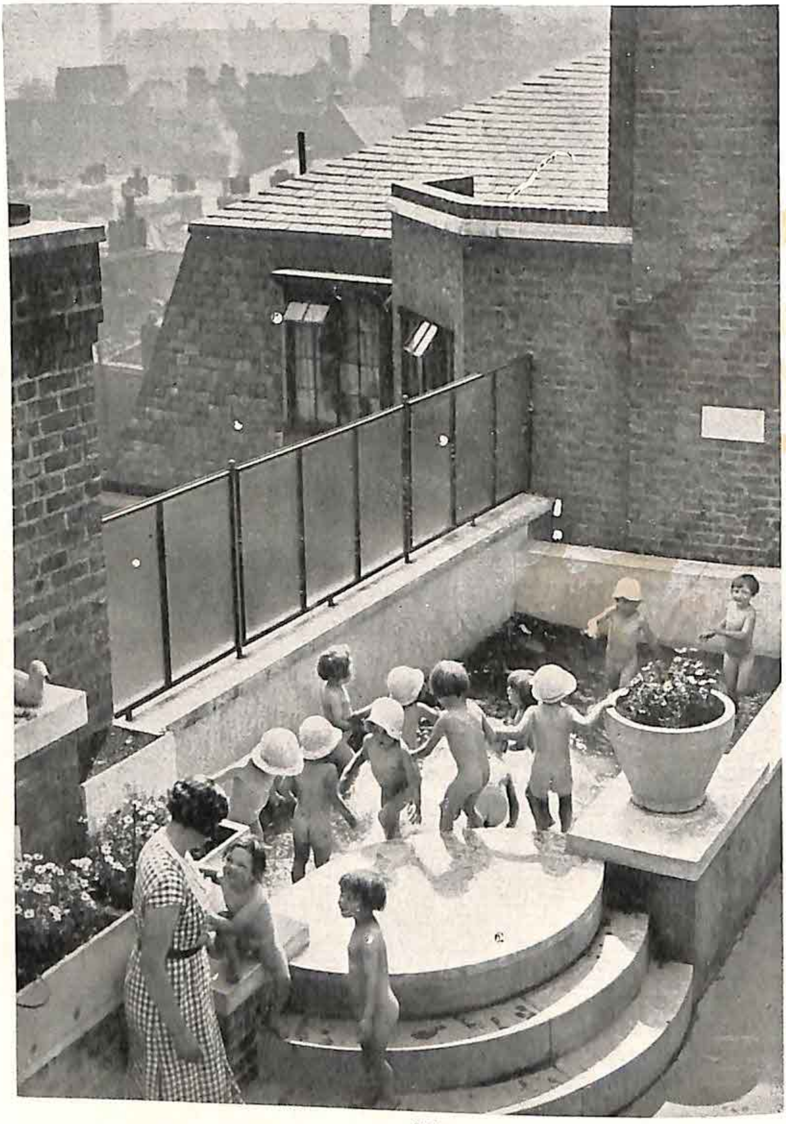
15. The Committee bases its calculations of size of unit and grouping of units on the assumption that up to 50 per cent. of children between 2 and 5 years may be expected to attend the newly established nursery schools. Since the compulsory school age begins at 5 years, school provision for 100 per cent. of children over that age will, of course, have to be made.

16. The estimated 50 per cent. of " under-fives " will, however, vary from area to area and it will probably be necessary in many densely populated urban areas to make immediate provision for 60 per cent., and even 80 per cent. The possible increase in numbers of children attending nursery schools when the idea becomes widely accepted, is a further consideration which must be borne in mind when school sites are being selected.

17. An annual birth rate of about 14 children per 1,000 of the population may be expected during the next decade and, if we assume that 50 per cent. of the children will attend nursery schools, then over a period of 3 years (2 to 5) one nursery school unit of 40 will serve a population of about 2,000 people.

18. Assuming a density of 12 houses, or 50 persons to the acre, a district one quarter of a mile in radius would contain a population of about 6,000 people. This would require three nursery units of 40 children each. If individual sites are out of the question, these units could be separately housed on one site, but the Committee recommends that no one site should contain more than four such units.

19. Population densities in excess of 50 persons to the acre are common in large towns. For instance, the County of London plan, recently prepared for the London County Council, advocates an average residential density of 136 persons to the acre. Higher densities exist in many places. In these cases the number of nursery school units serving a quarter of a mile radius would be considerably higher and it may not always be possible to provide a site for each group of four. One solution of this problem, therefore, may be the planning of part of the top floor of blocks of flats as a nursery school, opening out to a roof garden. This has been successfully adopted by the St. Pancras House Improvement Society. The children are lifted above the noise and dust of the street into fresh air and sunlight, and the activities of the nursery school do not disturb the tenants as might be the case if the children were in the courtyard below.



[Photo by courtesy of St. Pancras Housing Society

A NURSERY SCHOOL ROOF GARDEN IN ST. PANCRAS

THE SCHOOL SITE

20. The Committee recommends that all school buildings of whatever type should be so placed on the site that the rooms where the children play and work open out on to a south-south-east aspect.

21. This tends to produce a long, narrow building which, in turn, requires a somewhat wider frontage where, for reasons of aspect, the long side must be placed parallel to the road. Since the playing space should always be on the southern side of the building and the playrooms, as far as possible, should face away from the road, for reasons of noise and dust, the ideal situation would be where the road runs along the north side of the site. Where a south-south-east aspect allows the long side of the building to be placed at right angles to the road, a narrow frontage can be adopted and a saving in the cost of the site obtained. An irregular shaped site is no disadvantage. These are factors which, combined with the depth of the plot for sale, have a bearing on the area of land required to accommodate different types of schools. Minimum areas are recommended in the detailed schedules at the end of this Report.

22. It will be necessary to provide a fence to the school site, but for two reasons this should not be in the form of a high wall. The school should not be shut away from the activities of the community of which it is a part, and secondly an " unscalable " boundary fence is most difficult to devise and usually defeats its own purpose. A good boundary fence can be achieved by means of wire mesh attached to stout uprights, with the addition of a young hedge (hornbeam and beech planted together in a double row are suggested) which would in time grow up and cover the wire. Chestnut palings and a hedge are an alternative method.

23. Each unit of 40 may be housed on its own individual site but it is obvious that in a built-up urban area it may be difficult for town planning or economic reasons to obtain sufficient sites.

24. From the point of view of initial cost, there would appear to be no doubt about the economy effected by putting more than one unit on one site. This would effect savings in such things as:

Road charges	Boundary fencing
Main drainage and connection to sewer	Water, gas and electricity
	Entrance driveway

all of which would be multiplied by two or three in the case of the single units.

25. A further capital saving would be made by having one boiler-house and plant to serve the units, one utility room for laundry, drying room and store.

26. There is no objection to grouping, within the limits described herein, provided that the site chosen can be successfully divided into individual units, so that the child feels that he is not one of scores of others, but an individual in his own group. This proviso would make it possible for a Local Authority to develop an " awkward " or odd shaped piece of land hardly suitable for commercial building.

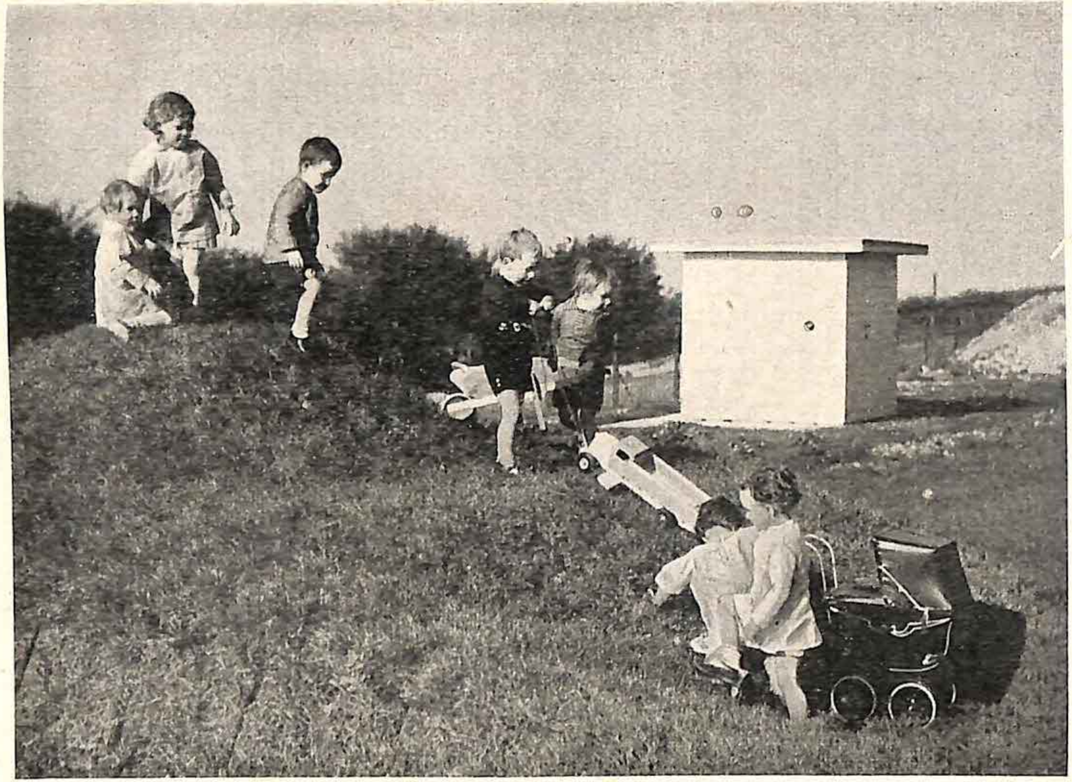
27. The entrance road should not be shut off from the main road by a gate, but should be treated as a cul-de-sac road off which are subsidiary entrance paths or roads to each unit. Each subsidiary entrance might have its own entrance gate from the cul-de-sac road to prevent children from unnecessary straying. Parents must be encouraged to bring their children right to the school building and not to leave them at a gate off the main road which at once cuts the property off from the community.

GARDENS AND EXTERNAL LAY-OUT

28. The Committee cannot stress too highly the importance of designing adequate, simple and yet beautiful surroundings to all school buildings. Many people dismiss the outside playing space as just so much ground to be hidden by asphalt or hard paving with any existing possibilities for individual development levelled ruthlessly away. Where the site has natural features—ups and downs, trees and bushes—these must be preserved as an integral part of the whole plan. They are a great source of enjoyment to all young children. Twisted trees will become sailing ships, and bushes the camps of explorers. The cost of the garden should not be considered as an " extra " over and above the estimate for the building, but as an essential part of the whole provision.

29. Where the site has not been endowed by nature with humps and hollows, trees and bushes, skilful designing must make good the natural deficiencies. The garden is just as much an " all-the-year-round " playing space as are the indoor playrooms themselves. Out-of-door life with all its opportunities gives a wealth of constantly changing interests and is a great safeguard against the spread of infection.

30. Immediately accessible from the playrooms there should be a stretch of hard paving on which the children can play even after a heavy shower of rain. For every 40 children, not less than 1,250 square feet of paving should be necessary, and each unit of 40 should have its own paved space. Coloured asphalt is a suitable material provided that the colour is permanent, and an alternative is brick or some form of composite stone made in large rectangular slabs. More research is necessary before the ideal form of dry paving is found. A sheltered portion of this hard surface for use on wet days seems desirable. It has been suggested that this might take the form of a " loggia " adjoining the building and so give



PLAYING OUT
OF DOORS

Photo
Home Counties
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added protection from rain and wind to the playrooms. Where this is done, great care must be taken that the playrooms are not unduly darkened and sunlight excluded. If the windows of the playrooms are recessed in deep reveals with projecting hoods to prevent excessive sun glare, they can be thrown open to obtain ample fresh air. In this way the playrooms can become open-air shelters and the need for additional ones may not arise, although extra covered space is useful.

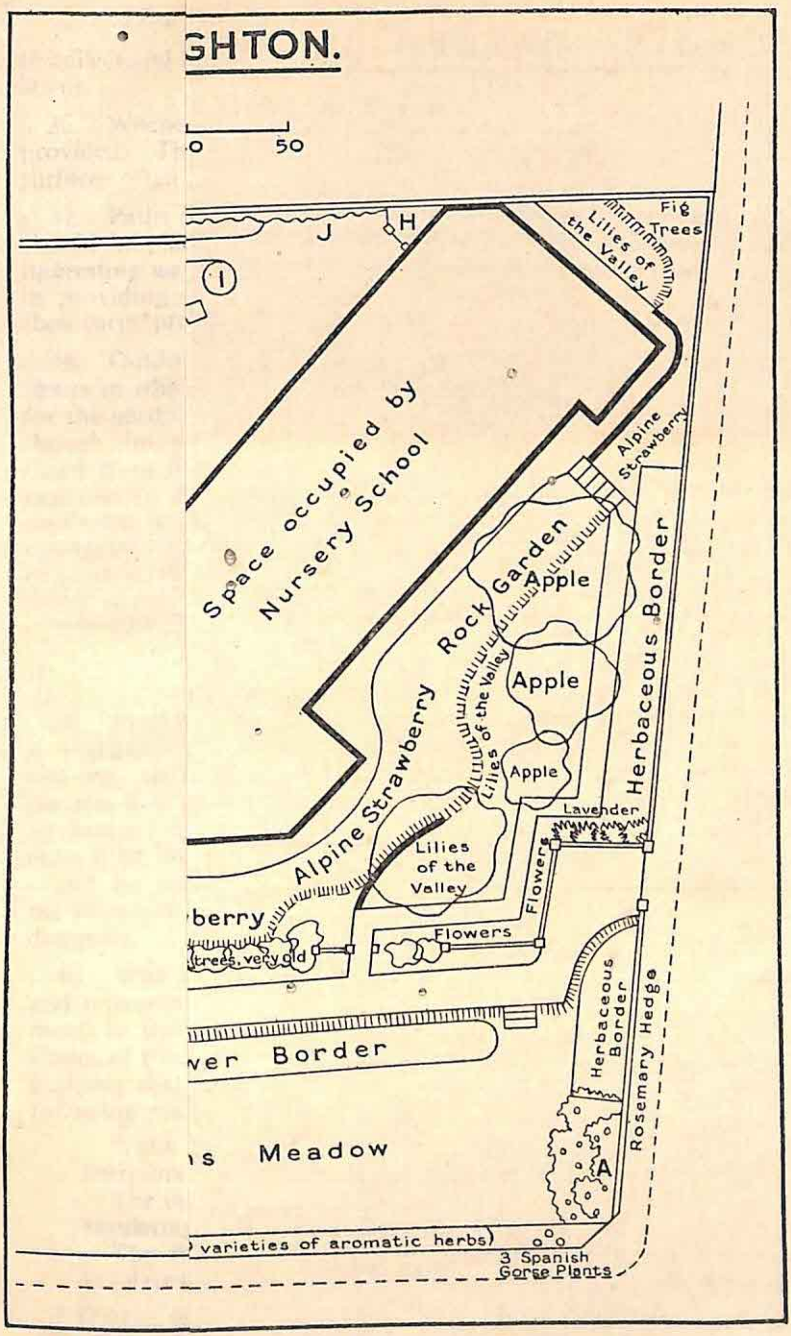
31. In a nursery school garden there must also be places for running and climbing, places for digging and growing things, places for imaginative and camping play, and places for keeping pets. Swinging and climbing equipment must be devised if there are no sturdy old trees with convenient branches, but the Committee urges the value of simple, improvised play material. Elaborate and expensive apparatus is unnecessary. A jungle gym, planks, boxes, logs, barrels and a short ladder are excellent examples of necessary and simple equipment. An old motor tyre can be hung from the frame of a swing, or from the branch of a tree.

32. A sand pit is an essential part of every nursery school garden. For 40 children, an adequate size is 144 square feet and a good shape is an oblong, 6 feet by 24 feet. The sand pit must be properly drained or it is unusable for half the year. Bricks laid dry make a good base. The sand pit should have a wide raised plinth all round. Care should be taken that the sand chosen is washed free from loam so that it does not become muddy when wet. It is an advantage to have a water tap near by with its own soak-away so that the children can easily combine sand and water play. Arrangements must be made for keeping the sand pit protected and therefore clean when not in use.

33. A paddling pool is an added attraction, and the water should have a depth of 3 or 4 inches. All artificial pools must be provided with a means of drainage, and water laid on, so that the pool can be cleaned out and re-filled frequently.

34. The nursery school garden must, of course, have borders where flowers are grown for the children to see and to gather, and a certain portion of good ground where the children can themselves dig and grow vegetables and flowers. Although children under 5 years do not usually need an individual garden, children over this age may become interested. These individual gardens should be in open ground, not under the drip of trees. If the site is large enough to allow for a plot where vegetables can be grown for the school kitchen, the advantages of this, from all points of view, are very great.

35. It should be remembered that the best growing soil is found in the top 12 inches. Great care should therefore be taken when the foundations for the building, the paths, and hard surfaces are made,



A. Plum suckers es in
B. Play shelter n
walls. ach-
C. Place for exca

I. Old ship's capstan used as a bird table.
K. Proposed site of outdoor brick built Wendy House.
L Fallen tree trunk placed against growing tree for climbing

to collect and keep this precious top soil to be spread on borders and lawns.

36. Whenever possible, a broad stretch of grass should be provided. This will be particularly useful in summer when paved surfaces often become too hot for the children.

37. Paths paved with hard surface and not less than 3 feet wide should be planned to wind around the garden and grounds in an interesting way. These paths will be an advantage in wet weather in providing suitable places where the children can run and use their carts, prams and tricycles.

38. Outdoor storage space is a necessity not only for the push-chairs in which some children may be brought to school, but also for the garden tools and the outdoor toys. A play house, strongly though simply made, fitted with steps on to the roof and a chute down from the other side offers endless opportunities for activity and can be combined with one of the outside store sheds. The roof must, of course, be protected by a railing. Such a play house, combining the function of storage and play space, need cost little more than the more usual jungle gym and chute and will have the added attraction of encouraging many more interesting activities on the part of the children.

THE SCHOOL BUILDING

39. In order to secure the maximum of efficiency and yet preserve a " home-like " atmosphere, the designer should acquaint himself not only with modern materials which have proved themselves, but also find out how to use to full scientific, and therefore economic advantage, the old-established materials. Advice should be sought from H.M. Building Research Station* on the behaviour of materials —and its well-known and widely recognized first volume on the Principles of Construction should be read by all nursery school designers.

40. With such knowledge of the behaviour of building materials, and reference to the publication of Codes of Functional Requirements in Building and other documents from the British Standard Codes of Practice Committee† it will be possible even at economic building cost to construct the framework and shell to give the following positive results:

Walls constructed so that they do not retain damp and therefore have definite sound and heat insulating values.

The internal partitions very rigidly built and giving definite insulating value.

The roof covering designed both to keep out wet and to insulate the rooms from extremes of heat and cold.

* Garston, near Watford, Hertfordshire.

† Lambeth Bridge House, London, S.E.1.

The subsequent cost of maintenance can be minimized if this item is kept in mind when the materials for the school are being chosen, and constructional details such as roof drainage, and finishes to doors and walls are being prepared.

41. The transference of noise and vibration from one room to the next can be minimized by designing the playrooms as " boxes ", floors, walls and ceiling " floating " in the main structure. As in electrical systems there should be no uninsulated member which could transfer the vibration from one part of the building to another. This may appear to be a complicated matter for such a small building, but discontinuity can easily be planned if thought about in the beginning.

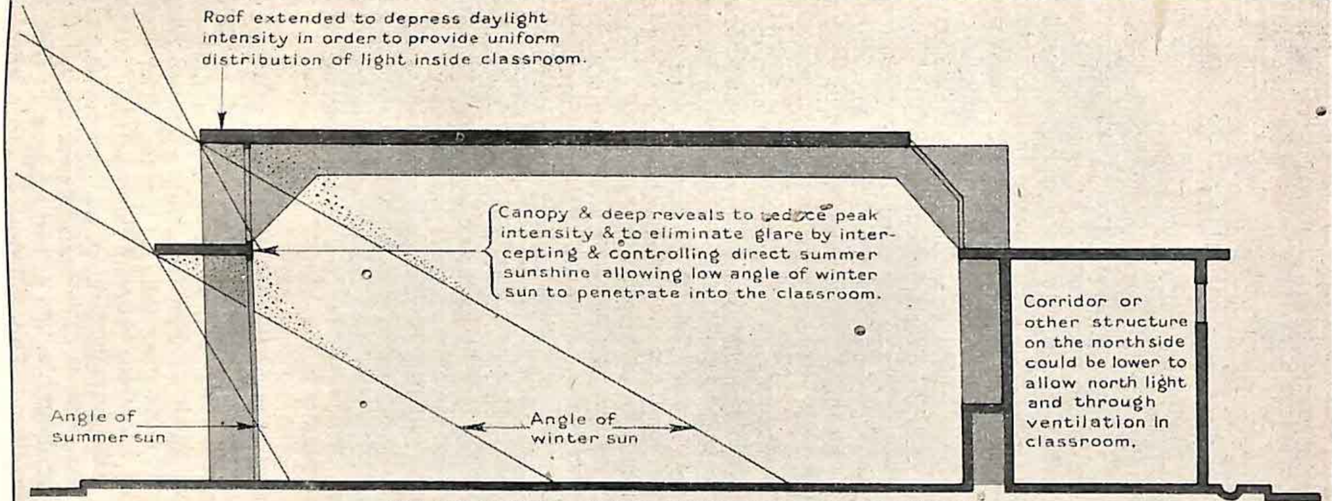
In addition to acoustic properties which rather suggest an absorbent surface, the walls, but in particular their lower portions at junctions with floors, cupboards and heating pipes, must also have the quality of cleanliness. The surfaces must stand up to cleaning and always have a fresh appearance. A painted plywood or fibre board dado would be suitable.

42. There will doubtless be types of pre-fabricated buildings on the market which may attract Local Authorities. It is difficult to forecast how good these will be. The Committee can only say that if the completed building gives the accommodation results, the correct setting and background and the proper heating and ventilation all as set out in these recommendations, there cannot be any objection to " pre-fabrication ". To achieve good results, pre-fabricated sections will be found to be most serviceable in parts such as window and wall panels, plumbing and electrical units.

43. It need not be thought that a building to last any length of time must, of necessity, be constructed say like a mediaeval castle. If good quality materials are used—properly jointed together—a lightweight panel building of the right scale will last just as long as it is required, and during its period of life, being less ponderous, may give a more healthy and aesthetic setting. The structure of a nursery school building must " breathe " and " fill its chest ". It should laugh with its gay and yet serious young inhabitants. It must always look young and attractive and never old and uninteresting.

PLAYROOMS

44. The playrooms are used by the children for a variety of purposes, for play and work, for meals and for rest. The aim in designing them should be to create a friendly atmosphere where the chilly impersonal appearance of an institution is avoided. Space and light are essential, but if they have been the only consideration they may easily give a bare bleak look to the children's rooms. The

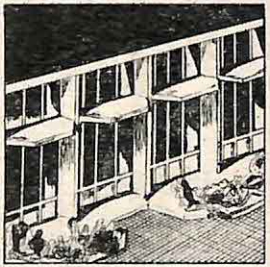


Roof extended to depress daylight intensity in order to provide uniform distribution of light inside classroom.

Canopy & deep reveals to reduce peak intensity & to eliminate glare by intercepting & controlling direct summer sunshine allowing low angle of winter sun to penetrate into the classroom.

Corridor or other structure on the north side could be lower to allow north light and through ventilation in classroom.

DIAGRAMMATIC CROSS SECTION THROUGH PLAYROOM



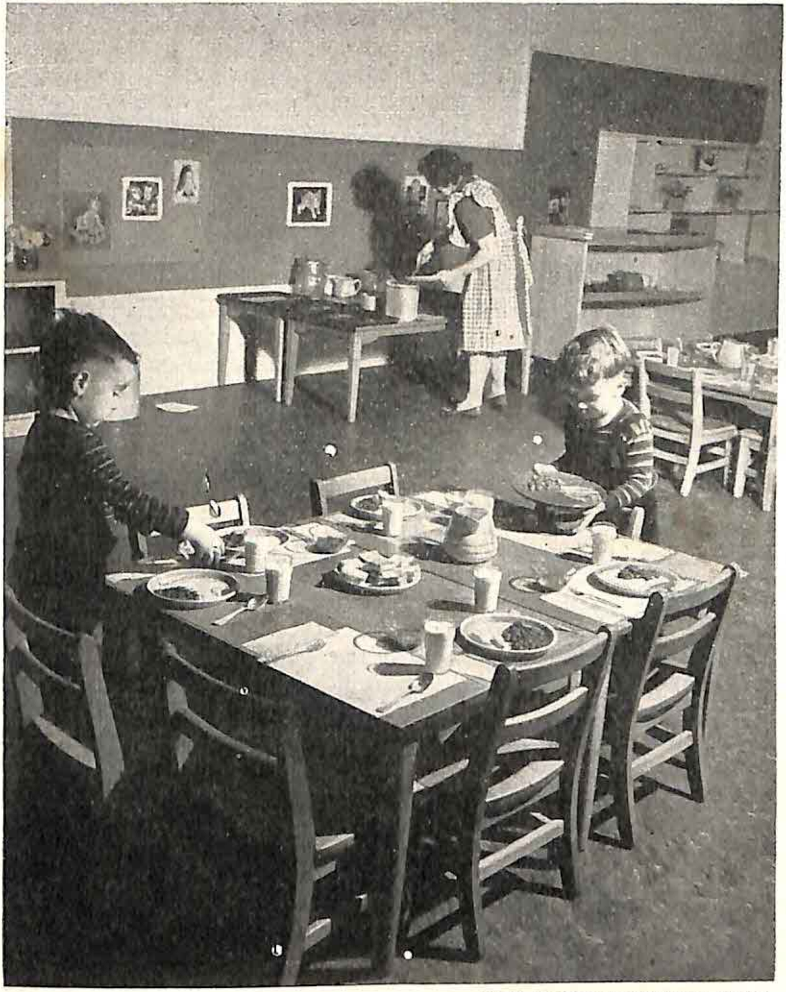
Committee recommends that the playrooms should be between 10 feet and 11 feet high. This height will allow for clerestory windows over the "loggia" where these are needed, and give a pleasant proportion to the playroom without increasing unnecessarily the cubic air space to be heated.

45. Whilst plenty of light and air is obviously essential, the provision of window space can be overdone. Light glare must be avoided and insulated wall space provided to maintain pleasant conditions in the room. Only one pair of doors opening directly to the garden, is necessary, and should be planned in relation to any other doors in the room so that the floor space is divided into sections across which draughts do not blow. The windows on the S.S.E. side should occupy about two-thirds of the available space, the sills being from 18 to 20 inches off the floor and the heads about 1 foot down from the ceiling. The total area of window space on the other walls need not exceed one-tenth of the whole wall area and should be so arranged that the natural lighting of the room is dispersed, possible glare from the south wall softened, and shadows dissolved.

46. The internal wall faces should not be finished with hard plaster except, possibly, for a narrow skirting round the base of the walls where the children are most likely to do damage with their toys or furniture. Sound must not echo from the wall surfaces and ceiling. The Committee advocates that scribbling space should not be provided on the walls, as young children do not readily distinguish which walls they may or may not use for such a purpose. Easels with loose sheets of paper should always be available for drawing and painting.

47. Low shelving and cupboards are needed so that children can find and replace their own toys and materials, as this encourages them to choose their own activities and keep their shelves tidy. The teacher will need a large cupboard for reserves of play material and other equipment. If this cupboard is built as a store room opening off the playroom, then it can also be used for housing some of the bigger toys not constantly in use.

48. Particular care must be taken that the floor of the play-room is both damp and draught proof, not forgetting to ensure a tight and dust proof joint between floor and walls. The floor finish is of great importance since small children frequently prefer to play on the floor where there is more space than on a table. The floor covering must, therefore, combine warmth and softness while standing up to frequent and thorough cleaning, but high polishing is to be avoided. When the under-floor is built of concrete off the solid ground, the concrete should be laid in two thicknesses with a damp-proof skin between them. This will prevent any rotting of



[Photo Art Commercial Studios, Oregon

A DINING ROOM IN AN AMERICAN NURSERY SCHOOL

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the floor covering and the structure. The choice of floor covering is always difficult because so many factors are involved. Hard wearing linoleum is always satisfactory, even if laid over heated floors. A wooden surface tends to be too hard or else splintery and easily becomes slippery. There are composition floors on the market, but careful note should be taken of their performance and lasting qualities when choosing one.

49. Special accommodation for the storage of the children's rest beds must be made. Each child under 5 will require his own bed, but the number of children requiring rest beds over this age depends on the type of district in which the school is placed. Medical advice should be sought as to the proportion of children between 5 and 7 years, whose health demands a midday rest on a bed. For the majority of normal, healthy children between 5 and 7 years, the Committee suggests that individual sleeping mats and ground sheets in the summer, should be sufficient. Bed stores should be recessed off the playroom, be well ventilated, and should have no doors behind which dust can accumulate. A gay curtain has sound deadening as well as aesthetic value.

50. The designer must bear in mind that for the older children play takes on a more developed character, and the children begin to need more definite information and to be able to learn to read, to write and to do number work. The playrooms must, therefore, be planned to give scope for learning, both through activity and through more systematic teaching. Equipment in play and work rooms for older children such as a small gas cooker, a low sink, a work bench and a low slab for clay modelling, would encourage enterprising activities.

W.C. AND WASHING ROOMS

51. Education implies the all-round care of the child, and an important aspect of this care is the gradual building up of ways of healthy living, and a close and constant attention on the part of the staff to the children's physical well-being. It is during their early years that children enjoy becoming independent and self-reliant. In this, the encouragement of the children in looking after the simple routines of health care for themselves, plays a valuable part. Little children welcome the opportunity to manage for themselves, but in order that nothing shall be neglected, the constant, although unobtrusive, supervision of the adult is necessary. A washing and W.C. room, and coat room, should open off each playroom. The designing of these self-contained groups of rooms within the nursery school is one of the surest safeguards against the spread of infection. It must be as simple and unremarkable for a small child to run from his toy or occupation into the washing room, to wash his hands after a visit to the W.C. and return to his task, as it is

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for him to run into the garden to fetch a ball. If the rooms are adjoining, the staff will find supervision a more practical possibility and will not need to organize group visits to the lavatories.

52. The Committee recommends that in the washing rooms there should be both W.C.s and wash basins and no high partition dividing the room. It is suggested that the walls should be tiled up to 5 feet high. It will be necessary to have two doors into the washing room, one leading directly from the garden and the other from the playroom. In each washing room there should be a low sink for incidental washing and a foot bath near the garden door. One bath will be necessary in a nursery school for 40 children.

53. Towel and flannel racks are part of the equipment necessary in the washing rooms. The Committee recommends that whenever possible these should be on wheeled frames that are easily movable rather than fixed to the walls. This enables the maximum amount of air to flow around the towels, and also makes it a simple matter for all the towels to be pushed out into the garden for a thorough airing whenever the weather permits. A number of short racks of this type are better than a few long ones so that they can be more readily moved by the children. Care must be taken to see that the hooks are sufficiently far apart to keep the towels from touching and that the room is sufficiently large, so that when all the racks are in the cloakroom there is ample space for them to stand well apart. If the towel racks are fixed to the wall, care must again be taken to see that the hooks are placed under a horizontal shelf running along the wall and not on the wall itself. This is to ensure that a current of air always surrounds the damp towels.

54. In the interests of hygiene, tooth brushes, clearly marked are better kept out of the children's reach before the age of 5. After that age they may be hung from each child's own hook. Experience varies as to the best method of keeping each child's brush and comb. A long low mirror should be fixed to the washing room wall.

55. The Committee recommends 1 fixed wash basin to every 5 children in each washing room. This should be supplemented by the provision of additional movable wash basin equipment (such as that used in many of the wartime nurseries), which will be needed most at midday.

56. The W.C. compartments should be divided by low partitions and have small doors which should be so balanced in hanging that there is no possibility of trapped fingers. These doors should be 1 foot clear from the floor and not more than 3 feet in height (top of door, 4 feet from the floor). Chains should be easily within the children's reach and the flushing system should have an easy working mechanism. The Committee recommends that 1 W.C. should be provided for each 5 children and where the total number of children

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S. C. E. R.

is not divisible by 5 the maximum number of W.C.s rather than the minimum should be provided. Urinals should not be provided for children under 7.

57. The period during the nursery school day which requires most careful planning is that which occurs round about the midday meal. The children should become accustomed to going to the lavatory, washing their hands and cleaning their teeth before the rest period which follows. Where there is a shortage of lavatories and wash basins, this period is frequently too precisely organized and the children may be kept waiting for too long a time. It is the aim of the nursery school teacher to allow the children to go from the playroom into the washing room and to perform their toilet at their own pace. The aim is constantly defeated if there is a shortage of equipment in the washing rooms. An adequate number of W.C.s and wash basins is an economy of both the children's and the staff's time and reduces the number of staff required for supervision. The Committee strongly emphasizes the necessity for the children to learn to wash their hands after going to the lavatory. This is only possible where there is an adequate supply of running water and basins.

COAT ROOMS

58. These rooms should also be adjoining each playroom and also open out into the garden where possible, so that the children may readily change their own hats and coats. Racks for shoes and stands with hooks for hats and coats will be needed. It is again very useful to have movable stands for hats and coats so that these may be easily pushed into the playroom or on to the "loggia" where they are more accessible to the children. It is important that the coat rooms should be sufficiently large to allow for all the coat racks to stand well clear of each other and also allow ample room for the children to move about. This room should have extra heating surface so arranged that the warmth of the air facilitates the airing of clothes and shoes. Drying room temperatures are not required here. It is suggested that here also the walls should be tiled to a height of 5 feet.

DRYING FACILITIES

59. From evidence collected by the Committee it appears that facilities for drying wet outdoor clothes and shoes, and for drying the incidental washing that must always be done in schools for young children, are in the majority of cases very far from satisfactory.

60. Besides increasing the warmth and air supply of the children's coat rooms by means of radiators and fans, a special drying room should be designed. It is imperative for the children's health that

wet coats and shoes shall not be left all day in an ill-ventilated coat room so that they are still damp when the child is ready to return home. It is not desirable that warm, moisture-laden air should penetrate the playroom from the coat room—hence the need for a drying room.

THE KITCHEN

61. The kitchen has been described as " the heart of the nursery school ". The children are free to run in and out and watch the preparation of their meals just as they would at home, and to ask questions of the cook. They should be able to see the trades-people bring the milk, meat and groceries to the kitchen door, and the designer must bear this in mind. It will be obvious that the cook in a nursery school is not appointed for her culinary powers alone, but also for her willingness to share with the rest of the staff in their educational responsibilities.

62. The Committee suggests that simple equipment is preferable and more suitable than anything expensive or elaborate. A well-ventilated and cool larder must in every case be part of the plan and a refrigerator is an additional safeguard for the children's health.

63. No facilities for washing clothes should be allowed in a nursery school kitchen. It will be noted that a sink which can be used for incidental washing has been included in each of the children's washing rooms. A wash basin in the kitchen for the use of the domestic staff should be installed so that it may be easy for them to wash their hands frequently, and a separate cloakroom where they may discard their outdoor clothes before entering the kitchen should also be provided.

MEDICAL AND ISOLATION ROOM

64. In every school, however small, a special room must be available for the immediate isolation of children who become unwell during the course of the day. Isolation may be an alarming experience to young children and the Committee recommends that the room set aside for this purpose should be adjacent to one of the playrooms, with a low window placed between the two rooms so that the sick child will be able to watch the other children and easily be observed by the staff without disturbance. To eliminate noise in the medical room, the window should be double glazed, and a curtain should be provided inside to cover this window when needed.

65. This room can also be used as the doctor's room when medical inspection or immunization is taking place, and as the school nurse's room for the treatment of minor ailments during her periodical visits.

66. It will be necessary to instal a wash hand basin in this room, a cupboard for the storage of first aid equipment, and a gas ring or electric hot plate.

HEATING AND VENTILATION

67. In view of the necessity for having the playrooms open to the outside air, the proper design of the heating and ventilation system is one of the most important parts of a nursery school building, and must not be considered just as one of those adjuncts which is put in after the general design is complete. Designers of schools should appreciate what is meant by the words "heating and ventilation", so that they can efficiently plan the amenities and harness all available resources, e.g. wall areas and surface treatments, to maintain good heating conditions despite external air conditions which may often be raw. The playrooms must neither be stuffy nor too cold; they must have plenty of fresh air without cold draughts. Heating and ventilation are twin considerations and cannot be considered or designed separately. So important is this whole matter that the Committee offers the following observations for guidance.

WARMTH

68. Within the living body considerable energy changes take place, the energy being derived from the oxidation of foodstuffs. Much of this energy is evolved as heat. Even when the body is at rest and in warm surroundings its heat production does not fall below a definite minimum level; and when physical work is performed the heat production rises. The gross mechanical efficiency of the human body is, for many tasks, of the order of 20 per cent.; the remaining 80 per cent. of the energy expended appears as heat. Thus it is that in a cold environment one can keep warm by taking exercise.

69. The body temperature of a healthy person varies but slightly. This constancy of temperature, in spite of wide variations in external conditions, is achieved by regulating (*a*) the rate of heat production within the body, and (*b*) the rate of heat loss from the body's surface. Increased muscular activity raises the heat production; and the wearing of warm clothing reduces heat loss. Certain physiological mechanisms also operate to regulate heat production and heat loss.

70. Subjective feelings of warmth are closely related to the rate at which heat is dissipated from the body, and the rate of heat transfer is governed not only by the temperature of the air, but also by the temperature of the walls and other solid surroundings, by the speed of air movement, and by the humidity of the air. At the temperatures which will be maintained in schools, however, atmospheric humidity exerts only a minor influence on warmth sensations, and it can be ignored.

71. A large proportion of the body heat is disposed of by radiation to the surroundings, and the radiation loss depends on the average temperature of the surface of the walls, ceiling and other solid surroundings. With a given air temperature, cold walls tend to make one feel cooler than when the walls are at air temperature; while warm walls, a warmed ceiling, or the presence of incandescent sources of radiation such as open fires, make one feel warmer. Other conditions being equal, an increase in the speed of air movement (so long as the temperature of the air is below that of the body) makes the environment seem cooler—one feels much colder out of doors on a wintry day when the wind rises, and the sultriness of a summer day is lessened by a light breeze.

72. In rooms which are warmed by radiant heating methods, such as open fires or the various forms of panel heating, the average temperature of the solid surroundings, or the mean radiant temperature as it is sometimes called, is usually some degrees above air temperature. On the other hand, when what are known as convective methods of heating, e.g. steam or hot water pipes, or the circulation of warm air, are employed, the mean radiant temperature tends to be a few degrees below air temperature. As the ventilation rate is increased the speed of the air movement also tends to increase. From this it will be seen that it is difficult to prescribe in terms of air temperature alone, a standard of warmth which will ensure ideal conditions whatever the method of heating employed. Instead, such standards are conveniently expressed in terms of equivalent temperature, a scale which takes account of radiation and air movement as well as of air temperature.

73. The standard of reference for the equivalent temperature scale is a uniform enclosure (air and walls at the same temperature) in which the air is still. That is to say, the equivalent temperature of an environment is that temperature of such an enclosure in which, in still air, the body would lose heat at the same rate as in the environment. Equivalent temperature is measured directly by an instrument known as the eupatheoscope, or it can be estimated from a knowledge of the temperatures of the air and of the solid surroundings and of the velocity of air movement.

WARMTH STANDARDS

74. Children in nursery schools spend much of their time at play. They are fairly active, and should be warmly clad in winter. Consequently, while during the colder seasons it is necessary to maintain a temperature that will enable the children to keep comfortably warm, it is necessary to avoid over-heating. In winter, a desirable equivalent temperature for nursery schools appears to be about 55° F. It is often impracticable to keep the temperature exactly at a pre-ordained level, but in these schools the equivalent temperature should be kept within the limits of 53° and 58° F.

75. It will not be practicable for those in charge of schools to measure the equivalent temperature and thus ascertain that the desirable degree of warmth is being maintained, and reliance will still have to be placed on the measurement of air temperature afforded by the ordinary thermometer. The heating engineer also needs to know the air temperature that his heating installation is required to maintain. As a generalization it can be said that, even in really cold weather, say at an outside temperature of 30° F., the indoor air temperature should be maintained at 58° F. The air temperature should not, in cool weather, exceed about 60° F. In allowing, in heating calculations, for the heat production of the occupants, it should be borne in mind that children of nursery school age produce only about half as much heat as adults. The sensible heat production of such a child can reasonably be taken as about 140 B.T.U. per hour.

HEATING METHODS

76. The heat supply to the rooms can come from a variety of sources, but in view of the desirability of always having a supply of hot water in the building, for various purposes, it would be logical to rely chiefly on a common source of heating.

77. An open fireplace properly fed by smokeless fuel provides a cheerful gathering point in the playroom on occasions. Some localities are well and economically served by gas and electricity.

78. Adequate " banks " of heating surface must be situated under the big window areas, powerful enough to catch the cold air and from it create warm currents of fresh air. Heating pipe coils or radiators are most suitable for this purpose. It will be found impossible completely to heat a playroom by this method alone, because the necessity for low silled windows precludes the use of sufficiently large " banks " or surfaces of heating. Floor heating becomes necessary to complete the effective heating and ventilation scheme.

79. It is possible to maintain floor surface temperatures of 70°-75° F. through some form of panel or pipe heating embedded in the floor. Thermostatically controlled systems can be worked economically by an intelligent stoker. It is possible to provide a substantial part of the heat required in the room this way, if wall and ceiling surfaces have the necessary thermal qualities and a satisfactory and lasting floor finish can be designed. The temperature of the floor surface should not exceed 75° F., for hotter floors are tiring to the feet.*

80. Lengths of heating pipe should be run at high window sill level on north walls and round any roof lights. Roof lights, even

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* Further information on these points should be obtained from H.M. Building Research Station, Garston, near Watford, Hertfordshire.

when well designed, might produce cold down draughts or let in the rain somehow, which all complicates heating methods. Any heating surface or hot water pipes placed within reach of the children should have temperatures not exceeding 120° F., so as to obviate risk of burns, and be adequately protected.

FRESH AIR REQUIREMENTS.

81. The greatest amount of fresh air that can be supplied without causing discomfort, and with due regard to economy, is desirable. In warm weather copious ventilation is possible and will generally be provided. In winter, ventilation must usually be restricted, both on account of the draughts that freer ventilation would cause, and because of the excessive fuel costs that would be entailed.

82. From the available evidence it can be concluded that during the colder seasons the fresh air supply should be not less than 1,000 cubic feet per hour per pupil. In occasional spells of severe weather the figure could be reduced somewhat, but it is recommended that the heating system should be designed to maintain an indoor temperature of 55° F., when the external temperature is 30° F., with a fresh air supply of 750 cubic feet per person per hour. On the general room size recommended in the schedules this is equivalent to four air changes per hour.

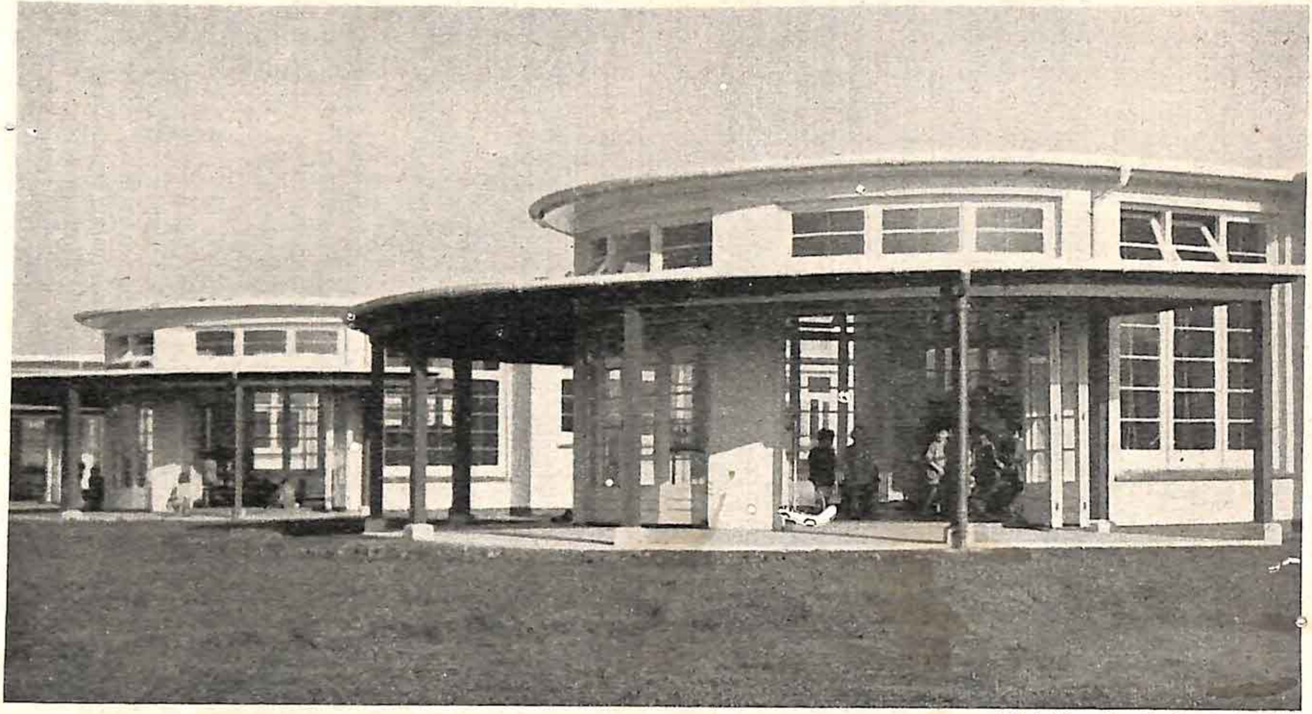
METHOD OF VENTILATION

83. In nursery schools ample ventilation can be obtained by the intelligent use of well-designed and suitably placed windows. Provision should be made for cross-ventilation, so that the air can be thoroughly scavenged. Hopper windows so constructed that the width of the opening can be varied, and provided with side cheeks to prevent draughts, are very suitable. It is an additional advantage if the upper edge of such a hopper is made to project a little way beyond the fixed frame, so that when the window is open the entering air is deflected upwards.

84. These bottom-hung hoppers are suitably sited in the lower part of the glazed area. Above them might well be provided large, centre-hung swivel windows that can be thrown fully open in warm weather, and opened to any required extent in cooler spells.

SUPERVISION

85. If any system of heating and ventilation is to give satisfaction in use it must be properly controlled. In a nursery school the heating and ventilation will come within the supervision of the Superintendent. Recommendations as to desirable temperatures have been made above. Over-heating will produce lassitude in the children, and it should be avoided. On the other hand, lavish ventilation should not be insisted upon at the cost of excessively



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THE HART HILL NURSERY SCHOOL, LUTON

low temperatures; in cold weather, ventilation arrangements should be used with discretion. If the heating system is designed in accordance with the recommendations made herein, and is properly tended, the first consideration in cold weather should be to see that the thermometer, which should be present in every playroom and always fixed off the wall (and not in a boxwood frame hanging on the wall with no air circulation round it) records 55° F., for there should then be sufficient ventilation and the children should be comfortably warm. As the weather becomes milder, the ventilation can be increased and the temperature still controlled at between 55° and 60° F.

THE STAFF

86. Although the details of staffing are outside the scope of this Report, the Committee felt obliged to give the matter some consideration in order to gauge the total accommodation needed.* It is the policy of the Nursery School Association to advocate the appointment of a trained nursery school teacher to each group of children within the unit, with a helper for each teacher. In the small nursery school of 40 children, one of the teachers in charge of a group will act as Superintendent, but in the larger schools it will be necessary to appoint a Superintendent who is not immediately responsible for a particular group of children. It is recognized that in the immediate post-war period these standards may not be attainable in every case.

87. In addition, accommodation is needed for domestic staff, a cook, kitchen assistant and cleaners, whose number will depend on the size of the school.

88. The appointment of a gardener or caretaker capable of simple maintenance work, who is interested in the children's outdoor activities and willing to help with the care of the children's pets during the week-ends and holidays, would be a decided advantage to the whole running of the school.

89. The Committee recommends that in the separate nursery school for 40 children and in the nursery school retaining its children up to 7 (i.e. Types I and II, see p. 31), the staff room should be also an " all purposes " room. This room will be furnished for adults and used as a staff dining room. Since, however, the staff in a nursery school are almost continually with the children it is not felt necessary that this room should be reserved entirely for their use, but should be available for small groups of children for whose activities a quiet retreat is sometimes necessary, and who now and then enjoy a more " grown-up " setting.

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* The Nursery School Association is issuing another pamphlet on staffing.

90. The addition of a small carpenter's bench would enable the staff to undertake repairs to the play material, and a small gas ring or electric hot plate (whose tap or switch is out of the children's reach) would also be an advantage.

91. Some members of the Committee felt, however, that a separate room for the use of the staff is necessary. Sewing, mending, toy-making and repairing have to be done in the staff room, and if this room is also to be used by children it means that work of this kind will often have to be cleared away before it is completed. Also, the staff need a room in which they can be away from the children, if only for a short time.

92. In the nursery-infant school (Type III, p. 33) a larger staff room will be needed. Since it is obviously undesirable to provide separate staff accommodation for those teachers who work with the 5-7 year-olds when the school is all under one roof, the staff and "all purposes" room combined which was described above will have to be omitted. The "under-fives" therefore, in the nursery-infant school under one roof, will not have access to a room planned for adults.

93. In all four types of school there will be a need for a separate small room for the use of the Superintendent or Head Teacher. In the small unit schools, the Superintendent will be able to interview parents in her own room, but in the larger nursery-infant schools a separate parents' room will be required where they can talk to the staff, and wait during medical inspection. A cloakroom and W.C. for the staff and visitors must be provided.

DIFFERENT TYPES OF PROVISION FOR CHILDREN BETWEEN 2 AND 7 YEARS

94. The proposals in the Education Bill* will make the provision of nursery school education obligatory, since it now comes within the scope of primary education. The development plan for any area must include proposals for nursery schools. The children's need for continuity of opportunity beyond the age of 5 years is also recognized by the possibility of developing nursery school education up to 7 years.

95. The Nursery School Association foresees a variety of ways in which this expansion of nursery school education could be planned by the Local Authorities. The type of provision made will depend firstly on general educational principles, and then on such local conditions as existing schools, density of population and number of children to be accommodated, and availability of suitable sites. Recommendations have, therefore, been made for the following four possible types of school taking children between the ages of 2 and 7 years.

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* This Report was written before the Bill became an Act.

Type I. The nursery school for children of 2-5 years. (Suggested unit 40 children.)

Type II. The nursery school retaining children up to 7 years. (Suggested unit 65-70 children, aged 2-7.)

Type III. The nursery-infant school for children of 2-7 years. (Suggested unit 120 children.)

Type IV. The infant school for children of 5-7 years, with nursery classes or a nursery wing for children 2 or 3-5 years. (This type will be dealt with in a later Report.)

TYPE I

THE NURSERY SCHOOL FOR CHILDREN OF 2-5 YEARS

96. The nursery school for children under 5 has much to commend it. It can provide a home-like setting and a good " stepping stone " between home and the larger school. It lessens the risk of infection from contact with older children by reason of its own small numbers, which is a factor of great importance for children under 5 years of age.

97. For the separate nursery school, the Committee recommends the adoption of 40 as a suitable total number of children to be accommodated in each unit. Where possible these units should be scattered throughout the district, but where this is impossible the Committee suggests that not more than three separate units of 40 children each should be placed on the same site, four being the absolute maximum. Where this grouping is necessary, the Authority may decide to administer the units as one school with one Superintendent. On the other hand, each unit of 40 children may be administered as a separate nursery school. In either case, the staff may choose to separate them by means of low boundary hedges with a low gate into each garden, as described under " The School Site ".

98. Where a Local Authority decides to provide nursery schools for children aged 2-5 years, other accommodation in infant schools will have to be found for all the children of 5-7 years in the same area.

99. Much is lost when those children who have spent some profitable years in the nursery school pass on at 5 to an infant school where there are 50 children in a class with one teacher, where the rooms are planned for formal instruction rather than learning through activity, where the W.C.s are " across the yard ", and where the playground itself is a barren stretch of asphalt on which several hundred children are herded together for " play ". Such a scheme is, from an educational point of view, uneconomic in the extreme.

100. The Committee strongly recommends that in an area where the decision to establish separate nursery schools is taken, a review

of all existing infant school accommodation is made at the same time, and steps taken, where necessary, to bring it up to the same standard as that proposed for Type III. The Buildings Advisory Committee will issue a further Report giving suggestions for the adaptation of infant schools to bring them to the required standard.

GROUPING WITHIN EACH UNIT OF 40 CHILDREN

101. In the 2-5 nursery school of 40 children, the Committee recommends that, for the purpose of judging the accommodation required, the unit should be considered in two groups of 20 children each. Each group would ultimately have its own teacher. The Superintendent will, of course, be free to arrange the number and ages of the children in the two groups as she wishes. She may, for instance, have one group of 12-15 children aged 2-3 years, and another group of 25 children aged 3-5 years. Some nursery school teachers, on the other hand, prefer a "family" grouping and will have children aged 2-5 years in each group. Two playrooms will therefore be required in the 40 unit nursery school, Type I.

TYPE II

THE NURSERY SCHOOL RETAINING CHILDREN UP TO 7 YEARS

102. Taking the 40 unit nursery school (Type I) as the basis of calculation, it will be remembered that the annual entry is 13 or 14 children. To keep on the five-year-olds up to 7, an increase of approximately 25-30 places would be required, making a total unit for this type of school of 65-70 children.

103. Local Authorities will have freedom to propose in development plans, nursery schools which retain their children up to the age of 7, without, however, admitting additional children at the age of 5 years. The adoption of this plan for nursery schools in any area will still necessitate the provision of separate infant schools for those children who enter school for the first time at the age of 5 years. On the basis of 50 per cent. attendance at the nursery school, the retaining of children up to 7 years would provide for only 50 per cent. of the total infant school age group. Separate infant schools would have to be provided for the remaining 50 per cent. of children in order to accommodate in school every child over the age of 5 years.

104. It seems likely that Type II may be adopted in those areas where there is a very large infant school population and where the existing infant schools cannot be readily adapted to come up to the standards outlined in this Report. The Local Authority may wish in such cases to consider retaining children in the nursery school up to 7 years before embarking on a programme of re-building and adaptation of their infant schools.

105. The Committee strongly urges that a Local Authority with a small infant school population should not adopt Type II as their plan for providing nursery school education, since in doing so they would deplete their infant schools still further and increase the likelihood of the absorption of the infant school into the junior school. Under these conditions they should adopt Type I or Type III. It is urged that all infant schools be brought up to the standards suggested in this Report.

GROUPING WITHIN UNIT OF 65-70 CHILDREN

106. The grouping of the children under 5 years in this nursery school for children 2-7 years (Type II) will follow the lines already indicated in the discussion of the separate nursery school for children 2-5 years (Type I).

107. The additional group of children over 5 years will be 25-30 in number. They will be in the care of one trained teacher, but the Committee strongly recommends that two additional rooms for work and play should be provided for their use. This is made necessary not only because of the wide age range of the children and the variety of interests and occupations that will engage them during the school day, but also because space, ample materials and freedom to initiate and carry through increasingly complex projects are essentials of nursery school education. This would enable one group of children to carry through an interesting experiment while a further group, needing a quiet place where some reading or number work could be done, could carry on without interruption. The decision of a Local Authority to retain children in the nursery school up to the age of 7 years must be regarded by them in the light of an educational experiment, and the results obtained from such an experiment cannot be considered to carry weight unless good accommodation and conditions are maintained throughout.

TYPE III

THE NURSERY-INFANT SCHOOL FOR CHILDREN 2-7 YEARS

108. The Committee foresees that in many areas new provision will have to be made, not only for the " under fives ", but for the infant school population also. Where this is so, the Local Authority may decide to combine the two into a new type of school which is called here the nursery-infant school. In this school, accommodation would be provided not only for children who enter school at 2 or 3 years and remain until they reach the age of 7 plus, but also for those who enter school for the first time at the age of 4½ or 5 years.

109. The nursery-infant school is, like Type II, a new experiment of which there are very few examples in this country. It differs from the infant school with a nursery wing or the infant

school with nursery classes in that it is designed from the start to provide nursery school opportunities for children up to the age of 7 years. With this in mind, it will be realized that buildings for the nursery-infant school will be such as will allow for adequate indoor and outdoor space for each group of children, and that the total number of children provided for will be such as to safeguard all the children from too much distraction. The special needs of the "under fives" for a home-like background and for careful protection against the risks of infection are perhaps more difficult to meet in the nursery-infant school than in the small unit nursery school, but these difficulties can be overcome by planning in individual groups even if under one roof.

110. In the nursery-infant school it is thought probable that those children who do not attend the whole nursery school period will normally enter school at 4½ years rather than at 5 years. There will, therefore, be some 50 per cent. of the child population 2-4½ years and 100 per cent. of the child population 4½-7 years, for whom accommodation must be found. If we accept these stages as equivalent in length (2½ years) and take the 40 unit nursery school as the basis of calculation, there will then be 40 children younger than 4½ years and 80 children over 4½ years. It will be realized that the size of groups for different age levels may fluctuate on account of varying birthday dates, and some grouping of children according to development rather than age may be necessary in order to keep the groups within the unit of an appropriate size. The unit based on this calculation would then be 120 children.

111. If this type of provision is chosen by a Local Authority, there would be a necessity for three nursery-infant schools accommodating 120 children each in a quarter mile radius area, which would otherwise require three 40 unit nursery schools, besides separate infant schools. The Committee recommends that the grouping of more than two nursery-infant schools (Type III) together on one site is undesirable, and that the maximum size of any nursery-infant school should not exceed 240 children. In such a school of 240 children, there would be 80 children under 4½ years and about 160 children between the ages of 4½ years and 7 years.

GROUPING WITHIN THE UNIT OF 120 CHILDREN

112. The grouping of the children under 5 has already been discussed under the section on Type I (Separate nursery school for children 2-5 years). The grouping of the 80 children between the ages of 4½ and 7½ years will depend on the plans and methods of the Head Teacher and her staff, but for the purpose of judging accommodation required, the children may be considered in three groups. A group of children between the ages of 4½ and 5½ should not exceed 20 in number and the remainder, between 5½ and 7½ years, could work in two groups of 30 children in each. Five

work and play-rooms would therefore be required for these 80 children between the ages of 4½-7 years. (The 40 children between 2 and 4½ years will require two playrooms, Type I.)

SCHEDULES OF ACCOMMODATION AND EQUIPMENT

SCHEDULE I

THE NURSERY SCHOOL FOR CHILDREN OF 2-5 YEARS

TYPE I

113. The area of ground required for one nursery school (40 children) is from one-half to two-thirds of an acre. Where three such schools are placed on one site, the area of land required might be two acres.

114. The accommodation required inside the nursery school building for 40 children aged 2-5 years would be:

1 Large Playroom which could accommodate all the 40 children on occasion, but which would normally be used for one group of 20 children.
    Area: 750 square feet.
    Height: 10 or 11 feet.
  With ensuite:
    A Washing Room with one sink, one footbath, four W.C.s, four wash basins, one bath and one sluice.
      Height: Not less than 8 feet 6 inches.
    1 Coat Room.
      Height: not less than 8 feet 6 inches.
    There must be plenty of space in these two rooms to ensure freedom of movement.
    1 Bed Store recessed off playroom.

1 Smaller Playroom adequate for a group of 20 children.
    Area: 500 square feet.
    Height: 10 or 11 feet.
  With ensuite:
    1 Washing Room with one sink, one foot bath, four W.C.s, four wash basins and one sluice.
      Height: Not less than 8 feet 6 inches.
    1 Coat Room.
      Height: Not less than 8 feet 6 inches.
    There must be plenty of space in these two rooms to ensure freedom of movement.
    1 Bed Store recessed off playroom.

2 Store Cupboards for play material and school equipment.
    Area: 72 square feet each.
    Height: Not less than 8 feet 6 inches.

1 " All Purposes " and Staff Room. (See page 29.)
Area: 180 square feet.
Height: Not less than 8 feet 6 inches.
1 Superintendent's and Parents' Room Combined.
Area: 120 square feet.
Height: Not less than 8 feet 6 inches.
1 Medical and Isolation Room with one wash basin.
Area: 120 square feet.
Height: Not less than 8 feet 6 inches.
1 Adult Lavatory and 2 Coat Rooms.
1 Kitchen.
Area: 250 square feet.
Height: Not less than 8 feet 6 inches.
1 Pram Store.
1 Drying Room.

115. In addition there would be a central heating and hot water installation with fuel store. The quick disposal of refuse and food waste must also be planned.

SCHEDULE II

NURSERY SCHOOL RETAINING CHILDREN UP TO 7 YEARS

TYPE II

116. The area of land required for one nursery school of this type would be three-quarters to one acre, and if three schools are placed on one site, approximately three and a half acres might be required.

117. The accommodation required inside the nursery school building for 65-70 children between 2 and 7 years would be:

For 2 groups of children under 5 years:

1 Large Playroom which could accommodate all the 40 children on occasion, but which would normally be used for one group of 20 children.
Area: 750 square feet.
Height: 10 or 11 feet.
With ensuite:
1 Washing Room with one sink, one foot bath, four W.C.s, four wash basins, one bath and one sluice.
Height: Not less than 8 feet 6 inches.
1 Coat Room.
Height: Not less than 8 feet 6 inches.
There must be plenty of space in these two rooms to ensure freedom of movement.
1 Bed Store recessed off playroom.

1 Smaller playroom adequate for a group of 20 children.
Area: 500 square feet.
Height: 10 or 11 feet.
With ensuite:
1 Washing Room with one sink, one foot bath, four W.C.s, four wash basins and one sluice.
Height: Not less than 8 feet 6 inches.
1 Coat Room.
Height: Not less than 8 feet 6 inches.
There must be plenty of space in these two rooms to ensure freedom of movement.
1 Bed Store recessed off playroom.
2 Store Cupboards for play material and school equipment.
Area: 72 square feet each.
Height: Not less than 8 feet 6 inches.

For the group of children over 5 years:
2 Rooms for Work and Play, 1 to include a low sink.
Area: 500 and 300 square feet respectively.
Height: 10 or 11 feet.
With ensuite:
1 Washing Room with six W.C.s and six wash basins, one sink and one foot bath..
Height: Not less than 8 feet 6 inches.
1 Coat Room.
Height: Not less than 8 feet 6 inches.
There must be plenty of space in these two rooms to ensure freedom of movement.
1 Bed Store recessed off one of the playrooms.
1 Store Cupboard for play material and school equipment.
Area: 72 square feet.
Height: Not less than 8 feet 6 inches.

General Rooms:
1 " All Purposes " and Staff Room (see p. 29).
Area: 240 square feet.
Height: Not less than 8 feet 6 inches.
1 Superintendent's and Parents' Room combined.
Area: 150 square feet.
Height: Not less than 8 feet 6 inches.
2 Adult Lavatories and 2 Coat Rooms.
1 Medical and Isolation Room, with wash basin.
Area : 150 square feet.
Height: Not less than 8 feet 6 inches.
1 Kitchen.
Area: 300 square feet.
Height: Not less than 8 feet 6 inches
1 Pram Store.
1 Drying Room.

118. In addition there would be a central heating and hot water installation with fuel store. The quick disposal of refuse and food waste must also be planned.

SCHEDULE III

THE NURSERY-INFANT SCHOOL FOR CHILDREN 2-7 YEARS

TYPE III

119. Where the Local Authority decides to build a nursery-infant school for 120 or 240 children, i.e. one or two schools, there are many methods of housing the various groups. One method would be to build two separate though adjacent sections, one for the "under fives" and the other for the children of 5-7 years. In this case, the staff would have a special responsibility for seeing that close links were established in order to bring a unified school into being. Another method is to build the nursery-infant school all under one roof. Care would have to be taken to see that the special needs of each group of children in the school were met, for example, the youngest group would need protection from too much noise and distraction and from the risks of infection which are increased by the greater size of the group; the older children would have to be so placed in relation to the "under fives" that the more boisterous activity and periods of more concentrated quiet activity, which are natural at this stage of development, were not constantly hampered by the programme and presence of the younger group.

120. The area of site for each nursery-infant school (120 children) should be not less than two acres if all groups are to be housed under one roof. This area will increase in proportion to the number of school buildings placed on the site.

121. The accommodation required inside the nursery-infant school building for 120 children aged 2-7 years would comprise:

For 2 groups of children under 4½ years:

1 Large Playroom which could accommodate all the 40 children on occasion, but which would normally be used for one group of 20 children.

Area: 750 square feet.
Height: 10 or 11 feet.

With ensuite:

1 Washing Room with one sink, one foot bath, four W.C.s, four wash basins, one bath and one sluice.
Height: Not less than 8 feet 6 inches.

1 Coat Room.
Height: Not less than 8 feet 6 inches.

There must be plenty of space in these two rooms to ensure freedom of movement.

1 Bed Store recessed off playroom.

1 Smaller Playroom adequate for a group of 20 children.
    Area: 500 square feet.
    Height: 10 or 11 feet.
  With ensuite:
    1 Washing Room with one sink, one foot bath, four W.C.s, four wash basins and one sluice.
      Height: Not less than 8 feet 6 inches.
    1 Coat Room.
      Height: Not less than 8 feet 6 inches.
    There must be plenty of space in these two rooms to ensure freedom of movement.
    1 Bed Store recessed off playroom.

2 Store Cupboards for play material and school equipment.
    Area: 72 square feet each.
    Height: Not less than 8 feet 6 inches.

Separate Kitchen for these two groups.
    Area: 250 square feet.
    Height: Not less than 8 feet 6 inches.

For 3 groups of children over the age of 4½ years:

5 rooms for Work and Play.
    Area: 500 square feet each.
    Height: 10 or 11 feet.

3 Washing Rooms opening off 3 of these 5 playrooms, 1 with four W.C.s and four wash basins and 2 with six W.C.s and six wash basins each. There should be a low sink and a foot bath in all three.
    Height: Not less than 8 feet 6 inches.
    There must be plenty of space in these three rooms to ensure freedom of movement.

3 Coat Rooms.
    Height: Not less than 8 feet 6 inches.
    There must be plenty of space in these three rooms to ensure freedom of movement.

3 Store Cupboards for play material and school equipment.
    Area: 72 square feet each.
    Height: Not less than 8 feet 6 inches.

1 Hall capable of accommodating 80 children.
    Area: 900 square feet.
    Height : 10 or 11 feet.

General Rooms:

1 Staff Room.
    Area: 250 square feet.
    Height: Not less than 8 feet 6 inches.

1 Head Teacher's or Superintendent's Room.
Area: 120 square feet.
Height: Not less than 8 feet 6 inches.
1 Parents' Room.
Area: 120 square feet.
Height: Not less than 8 feet 6 inches.
1 Medical or Isolation Room, with wash basin.
Area : 150 square feet.
Height: Not less than 8 feet 6 inches.
3 Adult Lavatories and 2 Coat Rooms.
1 Kitchen.
Area: 400 square feet.
Height: Not less than 8 feet 6 inches.
1 Pram Store.
1 Drying Room.

122. In addition there would be a central heating and hot water installation with fuel store. The quick disposal of refuse and food waste must also be planned.

SCHEDULE IV

SIZES AND SPACING OF EQUIPMENT

123. The Committee has collected information on certain sizes and spacing of equipment, and this is set out hereunder to help designers sense the scale to which they have to plan. As the ages of the children range from 2-7 years, two sets of figures are given to meet the corresponding increase in size.

Playrooms:	
Height of window sills*	18-24 inches.
Height of door handles:	
For children under 5 (lever type)	36 inches.
For children over 5 (knob type)	42 inches.
Washing Rooms:	
Height of pegs for towels and flannels	30-36 inches.
Distance between pegs for towels and flannels	12-15 inches.
Height of wash basins (width 22 inches, depth 16 inches)	20-30 inches.
Height of W.C. pedestals	9-12 inches.
Width in the clear between W.C. partitions	2 feet 3 inches.
Coat Rooms:	
Height of shoe racks with seat over	9-12 inches.
Height of pegs for coats	33-48 inches.
Distance between pegs for coats	12-15 inches.

* All heights measured from the floor.

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